DEPARTMENT OF ECOLOGY
State of Washington

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Water Resources Program
Department of Ecology

Section 2.2
Capital Budget Grant Request Form
Watershed Plan Implementation and Flow Achievement

Project Title: Yakima WWTP Outfall Alternative Evaluation
[If your Watershed Plan Implementation and Flow Achievement Request is related to or part of a Operational Project Funding Request for 2009-11 please cross-reference the name of that project in parenthesis above]

County: Yakima

WRIA: 37

If more space is needed attach additional sheets

1. Applicant Information

Applicant name City of Yakima	**Phone no.** (509) 249-6814	**Fax no.** (509) 575-6116
Address 2220 East Viola		
City Yakima	**State** WA	**Zip code** 98901
Email address mlinden@ci.yakima.wa.us		
Water right holder name (If applicable and if other than applicant) NA	**Phone Number** ( )	**Fax Number** ( )
Mailing address 2220 East Viola		
City Yakima	**State** **WA**	**Zip code** 98901

2. Project Location

Project name Yakima WWTP Outfall Alternative Evaluation
Project location Yakima River
Stream reach mile or location River Mile 110.1

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3. Project Type and Description

(Check all that apply)

Conservation and/or infrastructure improvement (pumps and pipes)	☒
Water storage feasibility study	☐
Water exchange or water right acquisition	☐

Please describe your project in detail

The City of Yakima owns and operates the Yakima Regional Wastewater Treatment Plant (WWTP) permitted under NPDES Permit No. WA-002402-3. The WWTP will soon need to address the impacts to treatment processes from the proposed levee setback project on the Yakima River.

The Gap-to-Gap Partnership on the Yakima River is evaluating flood plain restoration projects and one proposal is to set back or remove existing levees between Selah and Union Gap. If this is done the mixing zone for the Yakima Regional WWTP outfall will eventually be lost. Alternatives to the current outfall need to be identified and evaluated to determine the best approach to keep the WWTP compliant with its NPDES permit.

Benefits to setting back or removing existing levees include public safety, enhancement of flood plain, water quality improvements, and enhancement of fisheries, wildlife, and riparian habitats. Early evaluation of alternatives for the City WWTP discharge will allow for flood plain restoration efforts to begin in a timely manner and reduce the potential negative impacts caused by delaying restoration efforts.

A consultant Engineer will be hired to identify practical alternatives for the WWTP discharge and process modifications to meet NPDES permit requirements. City personnel will work closely with Department of Ecology Central Region staff to assure that alternatives for treatment and discharge of WWTP wastewater effluent meets permit requirements. Only alternatives approvable by Ecology are to be further evaluated and may require some preliminary design work for additional consideration. Estimates for design and construction of the alternatives are also to be evaluated.

The alternatives to be explored are described in the Statement of Work and Budget sections below.

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Use this box to make any other comments regarding the project and water rights involved This project does not deal with water rights, but could impact how much water is discharged to the Yakima River. Flow could be affected, depending on the alternatives selected.
Describe the project by task (statement of work) A Technical Analysis Document will be prepared that includes the following Tasks, which will evaluate the feasibility, actions, environmental issues, and costs of alternatives for the WWTP discharge when the levees are set back and the river moves. Task 1: Estimate impacts to the mixing zone based on setback of the east side levee. Task 2: Evaluate the following alternative discharge options and the costs and benefits associated with each. 1) Move the discharge point upstream or downstream 2) Maintain the current discharge point with a modified mixing zone 3) Install a concrete channel for a mixing zone flume 4) Construct wetlands 5) Re-use 6) Other alternatives Task 3: Estimate dilution factors (mixing zone) for alternative discharge arrangements. Task 4: Evaluate timing issues, i.e. Ecology approval, permitting, and construction of approved alternative(s). Task 5: Summary evaluation and recommendations.

4. Project Budget

Project Budget

Task 1: $40,000

Estimate impacts to the mixing zone based on setback of the east side levee.

1. Evaluation of river changes to be expected when levees are set back or removed (geomorphology, hydrogeology, timeline of channel movement, outfall locations, depth, width, flows etc.)
2. Evaluate the WWTP's ability to meet NPDES permit requirements with expected river changes. Explore whether the river will be deep enough and have enough flow for an adequate WWTP outfall mixing zone following levee setbacks and removals.

Task 2: $170,000

Evaluate the following WWTP discharge options. Include timelines, general design and construction cost estimates, and a cost-benefit analysis for each.

1) Move the discharge point upstream or downstream
2) Maintain the current discharge point with a modified mixing zone
3) Install a concrete channel for a mixing zone flume
4) Construct wetlands
5) Re-use
6) Other alternatives

Task 3: $50,000

Estimate dilution factors (mixing zone) for the five alternative discharge arrangements identified in Task 2.

Task 4: $20,000

Evaluate timing issues, i.e. Ecology approval, permitting, and construction of approved alternative(s).

Task 5: $20,000
Provide a summary evaluation and recommendations.

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Total budget by project task or by expenditure

Task 1 - $40,000
Task 2 - $170,000
Task 3 - $50,000
Task 4 - $20,000
Task 5 - $20,000
Total $300,000

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5. Funding Source Information

Total project amount expected to be provided by sources other than this program (dollar total and percent of project budget)

Identify sources and type of funding other than through this program grant. Include expected dates of participation. Include as an attachment; letters of commitment, offer letters, application approvals, etc.

Source and type of funding: Task #1 - City of Yakima personnel time, consultant time and existing budgeted funds for preliminary work

Amount: $20,000

Status: Ongoing

Dates of participation: Ongoing

Source and type of funding: Task #2 - City of Yakima personnel time, 100 acres of land for constructed wetland, City lands for water re-use

Amount: $ Millions

Status: Ongoing

Dates of participation: Ongoing

Source and type of funding: Task #3 - City of Yakima personnel time, consultant time

Amount: $15,000 annually

Status: Ongoing

Dates of participation: Ongoing

Source and type of funding: Task #4 – City of Yakima personnel time

Amount: $5,000 annually

Status: Ongoing

Dates of participation: Ongoing

Source and type of funding: Task #5 - City of Yakima personnel time

Amount: $5,000 annually

Status: Ongoing

Dates of participation: Ongoing

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6. Instream Flow and other Instream Habitat Benefits

A. Water Right Information - Attach Water Right documents
(You may skip this section if this application is for Storage Feasibility Study funding)

Water right holder's name (if other than applicant) NA	Phone no: ( )	Fax no: ( )
Address		
City	State	Zip code

Complete legal description of the property attached to this water right:

Water right number:

Parcel number associated with this water right:

Do you own the property proposed for this project? If not, please explain:

If the grant applicant is not the water right holder, please explain the reason:

Water source (Stream name):
Yakima River, River Mile 110.1

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B. Water Usage

Has water been put to beneficial use in the past five years?

Yes ☐ No ☐ I don't know ☐

Describe that use in terms of the specific beneficial use during that period:

(Please attach any available documents that verify that use during the last five years. Include aerial photographs, power company records, flow meter records, crop type records, NRCS documentation or FSA records)

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Has beneficial use of this water ceased for a period of five or more years during any period since 1967? Yes ☐ No ☐
Please describe the beneficial use for the water quantified under the water right discussed above. Describe the following: purpose (examples: domestic, irrigation, municipal); system type; if irrigation, describe crop type.
Quantify as nearly as possible current water use: Instantaneous rate (QI) of use: CFS Annual rate (QA) of use ACRE- FEET
Historic beneficial use quantity of the water right (highest of the last 5 years/ irrigation seasons in instantaneous and annual quantities) _____ CFS _____ ACRE-FEET
If irrigation, how many acres are irrigated under this water right?
Are there other water rights associated with this specific water right?
In order to process this pre-application ecology requires the following information (include for the previous five years; please attach copies of all documents and maps) ♦ Power data (contact local power utility for pump records, etc.) ♦ Historical crop type data (contact local FSA office) ♦ Flow meter records (contact local power utility) ♦ Aerial photos (contact local FSA office)

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C. Estimated Total Water Savings

Infrastructure projects: Estimate the water to be conserved through this project. Provide engineering or technical analysis to support this estimate.

MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOT
QA (ACRE-FEET)													
QI (CFS)													

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D. Additional Instream Benefits

Describe other instream benefits envisioned as a result of funding this project:

This technical analysis will provide answers to critical questions that the City of Yakima must answer in order to move forward and be a proactive participant in the watershed's levee setback plan. Answering these questions will assist stakeholders, help to prevent delays, and enhance the development and implementation of the levee setback plan.

Benefits of Task #1: The City of Yakima needs an estimate of impacts to the WWTP mixing zone based on setback of the eastside levee in order to evaluate how or even if it can still meet its NPDES permit mixing zone requirements following levee setback actions. Knowledge is necessary regarding morphology and hydrogeology changes to the river following levee removals and setbacks, and resultant impacts to the WWTP mixing zone.

Benefits of Task #2: This task will evaluate alternative WWTP discharge options related to the levee setback plan to determine WWTP and instream impacts, and the costs and benefits associated with each option.

Benefits of Task #3: This task will estimate specific dilution factors for the WWTP mixing zone under each of the alternatives, which will help to further identify instream hazards or benefits.

Benefits of Task #4: This task will evaluate timing issues related to Ecology approval, permitting, and construction of approved alternatives. It is important to know what estimated timelines will be regarding review, approval, permits, design, and construction.

Benefits of Task #5: This task will summarize the alternatives and make recommendations so the City can make responsible and reasonable decisions regarding facility upgrades. It will help to provide the City, ratepayers, and stakeholders with the information needed to make the appropriate decisions.

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7. Resources currently committed to ensure long-term performance of the proposed project (operation and maintenance).

Who is responsible for long-term operation and maintenance of the project?
The City of Yakima Wastewater Division

Have operation and maintenance costs been identified? Yes ☐ No ☒

If yes, please describe:

Summarize these costs on an annual basis below:
Operation and maintenance costs could increase dramatically, depending on the alternatives selected. The WWTP currently has an annual O & M budget of $18 million dollars.

Are measurement devices other than diversion source meters necessary to monitor compliance with the project intent or plan? Yes ☒ No ☐
If yes, please describe:
Sampling devices and flow meters may be needed depending on the alternatives selected.

Does a water measurement device exist on the source and downstream of the proposed project?
☐ yes ☒ no The WWTP has a measuring device for water into the facility.

If no, will a water measurement device be installed as part of this project? Yes ☒ No ☐
If yes, describe location and operating entity:
Possibly, depending on the alternatives selected.

If yes, provide the river mile:

What is the nearest stream gage downstream of the proposed project? Source name

BOR gauging station at Parker

River mile :

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8. Proponent's Readiness to Proceed

Describe status of feasibility reports, engineering design, and permits. Provide documentation for these deliverables and describe the project effort timeline as appropriate (submit two (2) copies of all required documents).

The City is ready to begin immediately. Discussions have already taken place with the Wastewater Division's engineering consultant, Black & Veatch.

Does the project proponent own the land for the proposed project? If not, does the proponent have documented access to the right of way or owns an easement to the property proposed (please attach appropriate documentation including title report as applicable).

The WWTP is currently permitted to discharge to the Yakima River at river mile 110.1. The City owns 100 acres of land between the WWTP and the Yakima River for the wetland alternative. The City owns numerous lands and has rights-of-way or easements for the water re-use alternative.

Design/Engineering Status:

Pre-planning (pre - permitting)	☒	Status:
Pre-design (design reports) (10%)	☒	Status:
Schematic design (30%)	☐	Status:
Design development (75%)	☐	Status:
Construction documents (95%)	☐	Status:
Bid documents (ready for bid)	☐	Status:

Permit Status

SEPA	☐	Status:
401	☐	Status:
Dept. of Fish and Wildlife consultation	☐	Status:
Storage and/or Secondary Use Permit	☐	Status:
Other: (_____)	☐	Status:
Other:(_____)	☐	Status:
Other: (_____)	☐	Status:

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9. Signatures (send this sheet electronically and by original signature in surface mail)

I certify that the information above is true and accurate to the best of my knowledge.

I understand that in order to process my application, I am hereby granting staff from the Department of Ecology access to the above site(s) for inspection and monitoring purposes.

If assisted in the preparation of the above application, I understand that all responsibility for the accuracy of the information rests with me.

I also understand that I may rescind this application at any time prior to signing the Agreement with no other obligations or requirements.

City of Yakima
Mary Linden Utility Engineer 12/18/08
(Applicant/Grant Recipient) (Date)

_____ ____/____/____
(Water Right Holder) (Date)

City of Yakima
Mary Linden Utility Engineer 12/18/08
(Land Owner(s) of Existing Place of Use) (Date)

For More Information Contact: Dave Burdick
Voice: (360) 407-6094
Email: dbur461@ecy.wa.gov
Web: http://www.ecy.wa.gov/watershed/Index.html

If you need this document in an alternate format, please call the Water Resources Program at 360-407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.